

FIFTEEN NEW SPECIES OF *Ferna* MALAISE FROM INDIA WITH A REVISED  
KEY TO THE ORIENTAL SPECIES (HYMENOPTERA, SYMPHYTA,  
TENTHREDINIDAE: ALLANTINAE)<sup>1</sup>

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(With fifty-nine text-figures)

To the previously recorded four species of genus *Ferna* Malaise from India, fifteen new species are added. The new species described are: *F. indiana*, *F. chambali*, *F. nigra*, *F. naga*, *F. canalicula*, *F. acclivata*, *F. himenderi*, *F. foveolata*, *F. emarginata*, *F. cinguliventris*, *F. himalayana*, *F. dutti*, *F. sagittata*, *F. brevis* and *F. pupa*. A revised key for the identification of all the Oriental species has been provided.

**Key words:** new species, *Ferna* key, Hymenoptera, Allantinae, India.

INTRODUCTION

With six new species, Malaise (1961) erected genus *Ferna* taking *F. longiserra* as its type. After more than three decades, only one new species *F. bengalensis* was added by Saini and Deep (1993).

In the present text, fifteen new species are being described and illustrated. Though 3 species have already been recorded from India, i.e., *F. breviginata* Malaise by Muche (1983) and the remaining two, *F. longiserra* Malaise and *F. punctifossa* Malaise by Saini and Deep (1993), yet *F. bullifrons* Malaise, *F. latifrons* Malaise and *F. acutiserra* Malaise are from the faunistic area of Burma. While preparing the key to the Oriental species, we examined all the species except *F. acutiserra* Malaise, for which a figure pertaining to the ovipositor sheath and some other key characters have been obtained from literature.

The holotypes of the new species are presently in our collections and will be deposited in the Pusa National Collections, Division of Entomology, Indian Agricultural Research Institute (IARI), New Delhi, India, after this work is published.

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Abbreviations used in the text are: EL = eye length, IATS = inner apical tibial spur, IDMO = interocular distance at the level of median ocellus, LID = lower interocular distance, MB = metabasitarsus, OATS = outer apical tibial spur, OCL = ocello-occipital line, OOL = ocello-ocular line, POL = postocellar line.

Key to the Oriental species of *Ferna* Malaise

1. Ovipositor sheath acutely triangular in lateral view (Fig. 7) ..... *F. acutiserra* Malaise, 1961.
- Ovipositor sheath broadly rounded or roundly pointed in lateral view (Figs. 8-11) ..... 2
2. Post-, inter- and circumocellar furrows absent ..... *F. bengalensis* Saini & Deep, 1993
- Post-, inter- and circumocellar furrows distinct ..... 3
3. Mesosternum entirely yellowish white ..... 4
- Mesosternum entirely black ..... 11
4. Median fovea in form of broad, deep, oval pit ..... *F. indiana* sp. nov.
- Median fovea broad ditch-like to narrow seam-like ..... 5
5. All tibiae and tarsi uniformly fuscoferruginous ..... *F. punctifossa* Malaise, 1961.
- At least base and apices of metatarsi fuscous to black ..... 6
6. All metatarsi entirely fuscous ..... 7
- Only bases and apices of metatarsi fuscous ..... *F. chambali* sp. nov.
7. Median fovea deep ditch-like or narrow seam-like in its anterior half and posteriorly not reaching median ocellus ..... 8
- Median fovea deep ditch-like or narrow seam-like and clearly extending to median ocellus ..... 9

8. Tergites 2-8 entirely black except posterior border of tergites 2 and 3 in the middle; postocellar area broader than long as 3:2; median fovea in form of narrow seam; scape 1.4 x its apical width; pedicel slightly shorter than its apical width; segments 3 and 4 as 10:11 ..... *F. nigra* sp. nov.
- Posterior margins of tergites 2-8 yellowish white; postocellar area broader than long as 2:1; median fovea in form of broad, deep ditch; scape as long as its apical width; pedicel 1.3 x its apical width; segments 3 and 4 as 4:5 ..... *F. naga* sp. nov.
9. Median fovea in form of deep, narrow seam at least in its anterior 3/4 ..... 10
- Median fovea broad ditch-like in its anterior half, posteriorly broad and shallow ..... *F. breviginata* Malaise, 1961
10. Median fovea clearly reaching median ocellus; scape 1.3 x its apical width; segments 3 and 4 as 6:7; POL:OCL:OOL :: 2:2:3 ..... *F. canalicula* sp. nov.
- Median fovea very shallowly reaching median ocellus, scape as long as its apical width; segments 3 and 4 as 8:11; POL:OCL:OOL :: 4:4:5 .. *F. acclivata* sp. nov.
11. A transverse band at the most on posteroventral lower 2/3 of mesopleuron (i.e. not touching epicnemium) ..... 12
- A transverse band on lower 1/2 of mesopleuron extending from epicnemium to coxal rim. .... 14
12. A narrow transverse band on posteroventral 1/2 of mesopleuron present ..... *F. himenderi* sp. nov.
- A transverse band on posteroventral 2/3 of mesopleuron present ..... 13
13. Malar space 0.5x diameter of median ocellus; median fovea in form of deep narrow seam extending upto median ocellus; a yellowish white spot present before mesoscutellum; all femora, tibiae and tarsi uniformly fuscoferruginous ..... *F. foveolata* sp. nov.
- Malar space 1x diameter of median ocellus; median fovea deep ditch-like in its anterior half, posteriorly broadens and shallowly reaching median ocellus; a spot before mesocutellum missing; all femora, tibiae and tarsi not so ..... *F. longiserra* Malaise, 1961
14. All tergites entirely black above ..... 19
- All tergites not entirely black above ..... 15
15. Mesonotal middle lobe entirely black ..... 16
- Sagittated apex of mesonotal middle lobe yellowish white ..... *latifrons* Malaise, 1961
16. Malar space 0.5x diameter of median ocellus ..... *F. emarginata* sp. nov.
- Malar space 1x diameter of median ocellus ..... 17
17. Posterior margins of some tergites yellowish white ..... 18
- Tergites 2 and 3 entirely yellowish white ..... *F. cinguliventris* sp. nov.
18. Median fovea in form of deep, narrow seam extending upto median ocellus; postocellar area broader than long as 3:2- ..... *F. bullifrons* Malaise, 1961
- Median fovea broad ditch-like with a median pit in its anterior half, posteriorly broadens and only shallowly reaching median ocellus; postocellar area broader than long as 2:1 ..... *F. himalayana* sp. nov.
19. Malar space 0.5x diameter of median ocellus; ..... *F. dutti* sp. nov.
- Malar space 1x diameter of median ocellus ..... 20
20. Mesonotal middle lobe entirely black ..... 21
- Sagittated apex of mesonotal middle lobe yellowish white ..... *F. sagittata* sp. nov.
21. Median fovea ditch-like in its anterior 1/2 and posterior only shallowly reaching median ocellus; postocellar area broader than long as 3:2; scape and pedicel each as long as its apical width; segments 3 and 4 as 4:5; clypeus roundly incised upto 1/2 of its medial length ..... *F. brevis* sp. nov.
- Median fovea ditch-like in its anterior 1/2 and posteriorly not reaching median ocellus; postocellar area broader than long as 2:1; scape and pedicel each 1.3x its apical width; segments 3 and 4 as 8:9; clypeus subrectangularly incised upto 1/2 of its medial length- ..... *F. pupa* sp. nov.

*Ferna indiana* sp. nov.

(Figs. 12, 23, 45)

*Female*: Unknown.

*Male*: Colour: Body black; the following areas are yellowish white: clypeus; labrum; mandible barring apex; supra-clypeal area extending upto the upper rim of antennal socket; lower 3/4 of inner orbit; hind orbit extending upto temple; extreme posterolateral margins of pronotum; tegula; mesopleuron except dorsal 1/2; metapleuron, except a spot on metepimeron; tergite 9 entirely; deflexed lateral sides of all tergites; all sternites more or less; all coxae and trochanters; all femora except inner dorsal aspects of apical 3/4. Rest of the parts of all legs light brown to fuscous. Wings hyaline; venation including costa, subcosta and stigma fuscous.

*Structure*: Length 4. mm. Antenna 3.7x head width; scape and pedicel each as long as its apical width; segment 3 shorter than 4 as 4:5; clypeus (Fig. 1) subrectangularly incised upto 1/3 of its medial length; labrum broader than long as 2:1; malar space 1.5x diameter of median ocellus; LID:IDMO:EL :: 6:7:4; head without postgenal carina; supra-antennal tubercles and



frontal ridges insignificant; median fovea in the form of deep pit in its anterior half and posteriorly not reaching median ocellus (Fig. 45); post-, inter- and circumocellar furrows distinct; lateral furrows distinct, parallel and abruptly ending just before hypothetical hind margin of head; postocellar area broader than long as 3:2; head narrowing behind eyes; POL:OCL:OOL :: 4:4:5; mesoscutellum subconvex; appendage not carinate; tarsal claw with a subapical tooth shorter than apical one and without basal lobe; metabasitarsus shorter than following joints combined as 3:4; metatibial spurs subequal in length; IATS:MB:OATS :: 5:12:4. Genitalia: penis valve (Fig. 23), gonoforceps (Fig. 12).

**Sculpture and pubescence:** Head with dense, minute, distinct punctures, surface shining; thorax punctate like head except apunctate appendage, surface shining with general oily lustre; abdomen apunctate, subshining. Body covered with silvery pubescence.

**Holotype:** Male, Nagaland, Vizho-Razho, 1700 m, 11.v.1993.

**Distribution:** Nagaland.

**Diagnosis:** The broad, deep, oval pit-like median fovea; colour pattern of body; broadly rounded ovipositor sheath; distinct post-, inter- and circumocellar furrows and insignificant frontal ridges distinguish *F. indiana* from other species of this genus.

**Etymology:** The species is named from India, in which the type locality falls.

***Ferna chambali* sp. nov.**  
(Figs. 13, 24, 34, 46)

**Female:** Colour: Body black; the following areas are yellowish white: clypeus; labrum; mandible barring apex; supraclypeal area; broad lower 3/4 of inner orbit; hind orbit extending upto temple; posterodorsal margin of pronotum; tegula; a spot on anterior 1/2 of mesocutellum; parapterum; mesepisternum except anterodorsal aspect; mesosternum; lower 1/2 of metapleuron; deflexed lateral sides of all tergites; all sternites entirely; all legs except apical tip of all tibiae,

extreme apices and basis of all tarsi which are fuscous. Wings hyaline; venation including costa, subcosta and stigma dark brown.

**Structure:** Average length 6 mm. Antenna 3.3x head width; scape as long as its apical width; pedicel 1.5x its apical width; antennal segment 3 shorter than 4 as 4:5; clypeus (Fig. 1) subsquarely incised upto 1/2 of its medial length; labrum broader than long as 2:1; malar space 1.5x diameter of median ocellus; LID:IDMO:EL :: 7:8:4; head without postgenal carina; supra-antennal tubercles moderate and confluent, with similar roundly raised frontal ridges; median fovea in the form of deep ditch in its anterior half and posteriorly broadly reaching median ocellus (Fig. 46); post-, inter- and circumocellar furrows sharp; lateral furrows deep, parallel and ending abruptly just before hypothetical hind margin of head; postocellar area subconvex, broader than long as 4:3; head narrowing behind eyes; POL:OCL:OOL :: 4:4:5; mesoscutellum subconvex; appendage not carinate; tarsal claw with a subapical tooth shorter than apical one and without basal lobe; metabasitarsus shorter than following joint combined as 4:5; metatibial spurs subequal in length; IATS:MB:OATS :: 3:7:2. Lancet (Fig. 34) having 13 serrulae. Lateral view of ovipositor sheath as in Fig. 9.

**Sculpture and pubescence:** Head with dense, minute, distinct punctures, surface shining; thorax punctate like head except apunctate appendage, surface shining with general oily lustre; abdomen apunctate, less shining. Body covered with silvery pubescence.

**Male:** Average length 5.5 mm. Similar to female. Genitalia: penis valve (Fig. 24), gonoforceps (Fig. 13).

**Holotype:** Female, Uttar Pradesh, Dhanolti, 2200 m, 25.vii.1993.

**Paratypes:** 7 females, 14 males with same date as holotype.

**Distribution:** Uttar Pradesh.

**Diagnosis:** Characteristic shape of median fovea; distinct colour pattern of legs; clear post-, inter- and circumocellar furrows, apically rounded



ovipositor sheath; scape as long as its apical width; pedicel 1.5x its apical width and malar space more than the diameter of median ocellus, are some of the characters which distinguish *F. chambali* from other species of *Ferna*.

**Etymology:** The species is named after Dr. Amrik S. Chambal, who is working on sawfly taxonomy at Punjabi University, Patiala, India.

*Ferna nigra* sp. nov.  
(Figs. 14, 25, 35, 47)

**Female:** Colour: Body black, yellowish white are: clypeus; labrum; mandible barring apex; a squarish spot on supraclypeal area; lower 1/2 of inner orbit; hind orbit extending upto temple; posterodorsal and extreme posterolateral margins of pronotum; tegula; a spot before mesoscutellum; a spot on mesoscutellum; parapterum; mesepisternum except anterodorsal spot; extreme posteroventral tip of mesepimeron; mesosternum; metepimeron except anterodorsal spot; extreme hind border in the middle of tergites 2 and 3; tergite 9 entirely; deflexed lateral sides of all tergites; all sternites; all coxae and trochanters; all femora except inner dorsal aspects of apical halves. Remaining parts of all legs light brown to fuscous. Wings hyaline, basal 1/2 of stigma fulvous; venation including costa and subcosta piceous.

**Structure:** Average length 5.5 mm. Antenna 3.7x head with; scape 1.4x its apical width; pedicel slightly shorter than its apical width; segment 3 shorter than 4 as 10:11; clypeus (Fig. 5) subrectangularly incised upto 1/2 of its medial length; labrum broader than long as 3:2; malar space 1.5x diameter of median ocellus; LID:IDMO:EL :: 2:2:1; head without postgenal carina; supra-antennal tubercles moderate and confluent with similarly roundly raised frontal ridges; median fovea in form of deep narrow seam in its anterior 3/4 and posteriorly not reaching median ocellus (Fig. 47); post-, inter- and circumocellar furrows distinct; lateral furrows pit-like, parallel and ending abruptly well before

hypothetical hind margin of head; postocellar area broader than long as 3:2; head narrowing behind eyes; POL:OCL:OOL :: 4:4:5; mesoscutellum subconvex; appendage not carinate; tarsal claw with a subapical tooth shorter than apical one; metabasitarsus shorter than following joints combined as 3:4; metatibial spurs subequal; IATS:MB:OATS :: 3:5:2; Lancet (Fig. 35) having 16 serrulae. Lateral view of ovipositor sheath as in Fig. 10.

**Sculpture and pubescence:** Head with dense, minute, distinct punctures, surface shining; thorax punctate like head, except apunctate appendage, surface shining with general oily lustre; abdomen apunctate, less shining. Body covered with silvery pubescence.

**Male:** Average length 5.5 mm. Similar to female. Genitalia: penis valve (Fig. 25), gonoforceps (Fig. 14).

**Holotype:** Female, Arunachal Pradesh, Bomdila, 2550 m, 7.v.1992.

**Paratypes:** Arunachal Pradesh, Bomdila, 2550 m (5 females, 50 males) 7-9.v.1992.

**Distribution:** Arunachal Pradesh.

**Diagnosis:** Though *F. nigra* is allied to *F. naga*, it can be distinguished from it as well as other *Ferna* species on the basis of the characteristic median fovea; scape 1.4x its apical width; pedicel a little shorter than its apical width; segments 3 and 4 as 10:11; distinct colour pattern of body; and rounded ovipositor sheath.

**Etymology:** The species name pertains to the general black colour of the body.

*Ferna naga* sp. nov.  
(Figs. 6, 36, 48)

**Female:** Colour: Body black; the following areas are yellowish white: clypeus; labrum; mandible barring apex; a spot on supraclypeal area; lower 3/4 of inner orbit; hind orbit extending upto temple; tegula; a spot before mesoscutellum; parapterum; mesepisternum except anterodorsal aspect; posterior margins of tergites 2-8; tergite 9 entirely; deflexed lateral sides of all tergites;



all sternites entirely; all coxae and trochanters; all femora except fuscoferruginous dorsal aspects of apical 1/2; tibiae and tarsi of front four legs except fuscoferruginous posterior parts. Metatibia with somewhat brownish tinge; metatarsi fuscous. Wings hyaline, venation including costa, subcosta and stigma fuscous.

**Structure:** Average length 5 mm. Antenna 3.2x its apical width; antennal segment 3 shorter than 4 as 4:5; clypeus (Fig. 6) accurately incised upto 1/2 of its medial length; labrum broader than long as 3:2; malar space 1.5x diameter of median ocellus; LID:IDMO:EL :: 6:7:4; head without postgenal carina; supra-antennal tubercles and frontal ridges insignificant; median fovea in the form of a deep ditch in its anterior 3/4 and posteriorly not reaching median ocellus (Fig. 48); post-, inter- and circumocellar furrows sharp, lateral furrows distinct parallel and ending abruptly just before hypothetical hind margin of head; postocellar area subconvex, broader than long as 4:3; head narrowing behind eyes; POL:OCL:OOL :: 4:4:5; mesoscutellum subconvex; appendage not carinate; tarsal claw with a subapical tooth shorter than apical one and without basal lobe; metabasitarsus shorter than following joints combined as 4:5; metatibial spurs subequal in length; IATS:MB:OATS :: 5:12:4. Lancet (Fig. 36) having 14 serrulae. Lateral view of ovipositor sheath as in Fig. 10.

**Sculpture and pubescence:** Head with dense minute punctures, surface shining; mesonotum with dense, minute, irregular punctures; surface shining; mesoscutellum with scattered, minute punctures on its posterior part; appendage apunctate, polished; mesepisternum minutely punctured; mesosternum with few scattered, minute punctures, surface shining with general oily lustre; abdomen apunctate, less shining. Body covered with silvery pubescence.

**Male:** Unknown.

**Holotype:** Female, Nagaland, Pfutsero, 2100 m, 20.v.1993.

**Paratype:** 1 female, with same data as holotype.

**Distribution:** Nagaland.

**Diagnosis:** *F. naga* comes close to *P. nigra*, but is distinct from it and from other species of this genus by the following characteristic shape of median fovea; distinct colour pattern of body; postocellar area broader than long as 2:1; scape as long as its apical width; pedicel 1.3x its apical width; antennal segments 3 and 4 as 4:5.

**Etymology:** The species is named after Nagaland, the state in which the type locality falls.

*Ferna canalicula* sp. nov.

(Figs. 2, 15, 26, 37, 49)

**Female:** Colour: Body black; the following areas are yellowish white: Clypeus; labrum, mandible barring apex; a square spot on supraclypeal area; lower 1/2 of inner orbit; hind orbit extending upto temple; posterodorsal and extreme posterolateral margins of pronotum; tegula; a spot before mesoscutellum; a spot on mesoscutellum; parapternum; mesepisternum except anterodorsal spot; extreme posteroventral tip of mesepimeron; mesosternum; metepimeron except anterodorsal spot; extreme hind border in the middle of tergites 2 and 3; tergite 9 entirely; deflexed lateral sides of all tergites; all sternites; all coxae and trochanters; all femora except inner dorsal aspects of apical halves. Rest of parts of all legs light brown to fuscous. Wings hyaline, basal 1/2 of stigma fulvous; venation including costa and subcosta piceous.

**Structure:** Average length 5.5 mm. Antenna 3.6x head width; scape 1.3x its apical width; pedicel as long as its apical width; segment 3 shorter than 4 as ratio 6:7; clypeus (Fig. 2) roundly incised upto 1/2 of its medial length; labrum broader than long as 3:2; malar space 2x diameter of median ocellus; LID:IDMO:EL :: 2:2:1; head without postgenal carina; supra-antennal tubercles insignificant and confluent with roundly raised frontal ridges; median fovea in form of deep narrow seam distinctly reaching median ocellus (Fig. 49); post-, inter and circum-ocellar furrows distinct; lateral furrows deep, parallel and abruptly



ending well before hypothetical hind margin of head; postocellar area broader than long as 3:2; head narrowing behind eyes; POL:OCL:OOL :: 2:2:3; mesoscutellum subconvex; appendage not carinate; tarsal claw with a subapical tooth shorter than apical one and without basal lobe; metabasitarsus equal to following joints combined; metatibial spurs subequal in length; IATS:MB:OATS :: 4:8:3. Lancet (Fig. 37) having 14 serrulae. Lateral view of ovipositor sheath as in Fig. 9.

**Sculpture and pubescence:** Head with a few minute punctures on frontal area, surface shining; thorax with dense, minute, irregular punctures, more conspicuous on posterior slope of mesoscutellum, but appendage apunctate and polished; abdomen microstriated, surface subshining. Body covered with silvery pubescence except on yellowish white parts where it appears to be golden.

**Male:** Average length 5.5 mm. Similar to female. Genitalia: penis valve (Fig. 26), gonoforceps (Fig. 15).

**Holotype:** Female, Arunachal Pradesh, Bomdila, 2550 m, 8.v.1992.

**Paratypes:** Arunachal Pradesh, Bomdila, 2550 m (5 females, 37 males) 7-9.v.1992.

**Distribution:** Arunachal Pradesh.

**Diagnosis:** The deep, narrow seam-like median fovea clearly reaching median ocellus; scape 1.3x its apical width; segments 3 and 4 as 6:7; POL:OCL:OOL :: 2:2:3; and distinct colour pattern of the body are the distinguishing characters which separate *P. canalicula* from its allied species *F. acclivata* and other species of the genus.

**Etymology:** The species is named *canalicula* from the seam-like median fovea reaching median ocellus.

***Ferna acclivata* sp. nov.**

(Figs. 1, 16, 27, 38, 50)

**Female:** Colour: Body black; the following areas are yellowish white: clypeus; labrum;

mandible barring apex; a square spot on supraclypeal area; lower 1/2 of inner orbit; hind orbit extending upto temple; posterodorsal and extreme posterolateral margins of pronotum; tegula; a spot before mesoscutellum; a spot on mesoscutellum; parapterum; mesepisternum except anterodorsal spot; extreme posteroventral tip of mesepimeron; mesosternum; metepimeron except anterodorsal spot; extreme hind border in the middle of tergites 2 and 3; tergite 9 entirely; deflexed lateral sides of all tergites; all sternites; all coxae and trochanters; all femora except inner dorsal aspects of apical halves. Remaining parts of all legs light brown to fuscous. Wings hyaline, basal 1/2 of stigma fulvous; venation including costa and subcosta piceous.

**Structure:** Average length 5 mm. Antenna 3.6x head width; scape as long as its apical width; pedicel as long as its apical width; segment 3 shorter than 4 as 8:11; clypeus (Fig. 1) subrectangularly incised upto 1/2 of its medial length; labrum broader than long as 2:1; malar space 2x diameter of median ocellus; LID:IDMO:EL :: 3:3:2; head without postgenal carina; supra-antennal tubercles and frontal ridges insignificant; median fovea in form of deep narrow seam in its anterior 2/3 and posteriorly only shallowly reaching median ocellus (Fig. 50); post-, inter- and circumocellar furrows sharp and distinct; lateral furrows shallow, pit-like, diverging backwards and ending well before hypothetical hind margin of head; postocellar area broader than long as 3:2; head narrowing behind eyes; POL:OCL:OOL :: 4:4:5; mesoscutellum subconvex; appendage not carinate; tarsal claw with subapical tooth shorter than apical one; metabasitarsus shorter than following joints combined as 3:4; metatibial spurs equal in length; IATS:MB:OATS :: 1:3:1. Lancet (Fig. 38) with 15 serrulae. Lateral view of ovipositor sheath as in Fig. 10.

**Sculpture and pubescence:** Head with dense, minute, distinct punctures, surface shining; thorax punctate like head except apunctate appendage, surface shining with general oily



lustre; abdomen apunctate, less shining. Body covered with silvery pubescence.

**Male:** Average length 5 mm. Similar to female, Genitalia: penis valve (Fig. 27), gonoforceps (Fig. 16).

**Holotype:** Female, Arunachal Pradesh, Bomdila, 2550 m, 8.v.1992.

**Paratype:** Arunachal Pradesh, Bomdila, 2550 m (5 females, 84 males) 7 - 9.v.1992.

**Distribution:** Arunachal Pradesh.

**Diagnosis:** *F. acclivata* is distinct in having median fovea shallowly reaching median ocellus; scape as long as its apical width; segments 3 and 4 as 8:11; POL:OCL:OOL :: 4:4:5; mesosternum yellowish white; all metatarsi entirely fuscous, and rounded ovipositor sheath. These characters suffice to separate it as a distinct species.

**Etymology:** The species name pertains to the gradual rise of median fovea in its posterior half.

***Ferna himenderi* sp. nov.**  
Figs. (5, 10, 12, 39, 51)

**Female:** Colour: Body black; the following areas are yellowish white: clypeus; labrum; mandible barring apex; broad lower 1/2 and narrow streak-like upper 1/2 of inner orbit; lower 1/2 and narrow streak-like upper 1/2 of inner orbit; lower 1/4 of hind orbit; spot on temple; posterodorsal margin of pronotum; tegula; a stripe on lower posterior 1/2 of mesopleuron; deflexed lateral sides of all tergites; all sternites entirely; all coxae, trochanters, femora and tibiae; rest of parts of all legs fuscoferruginous to fuscous. Wings hyaline, venation including costa, subcosta and stigma piceous.

**Structure:** Length 5 mm. Antenna 3.2x head width; scape 1.3x its apical width; pedicel 2x its apical width; antennal segment 3 shorter than 4 as 8:9; clypeus (Fig. 5) subrectangularly incised upto 1/2 of its medial length; labrum broader than long as 2:1; malar space 1.5x diameter of median ocellus; LID:IDMO:EL ::

5:5:3; head without postgenal carina; supra-antennal tubercles moderate and confluent with similar roundly raised frontal ridges; median fovea in form of deep ditch in its anterior 1/2 and posteriorly broadly, shallowly reaching median ocellus (Fig. 51); post-, inter- and circumocellar furrows sharp and distinct; lateral furrows distinct, parallel and ending abruptly just before hypothetical hind margin of head; postocellar area subconvex, broader than long as 2:1; head narrowing behind eyes; POL:OCL:OOL :: 1:1:1; mesoscutellum sub-convex; appendage not carinate; tarsal claw with subapical tooth shorter than apical one and without basal lobe; metabasitarsus shorter than following joints combined as 6:7; metatibial spurs subequal in length; IATS:MB:OATS :: 5:12:4. Lancet (Fig. 39) having 12 serrulae. Lateral view of ovipositor sheath as in Fig. 10.

**Sculpture and pubescence:** Head and mesonotum with dense, minute punctures, surface shining; mesoscutellum with scattered, minute punctures on its posterior part; appendage apunctate, polished; mesepisternum minutely punctured; mesosternum with a few scattered, minute punctures, surface shining with general oily lustre; abdomen apunctate, less shining. Body covered with silvery pubescence.

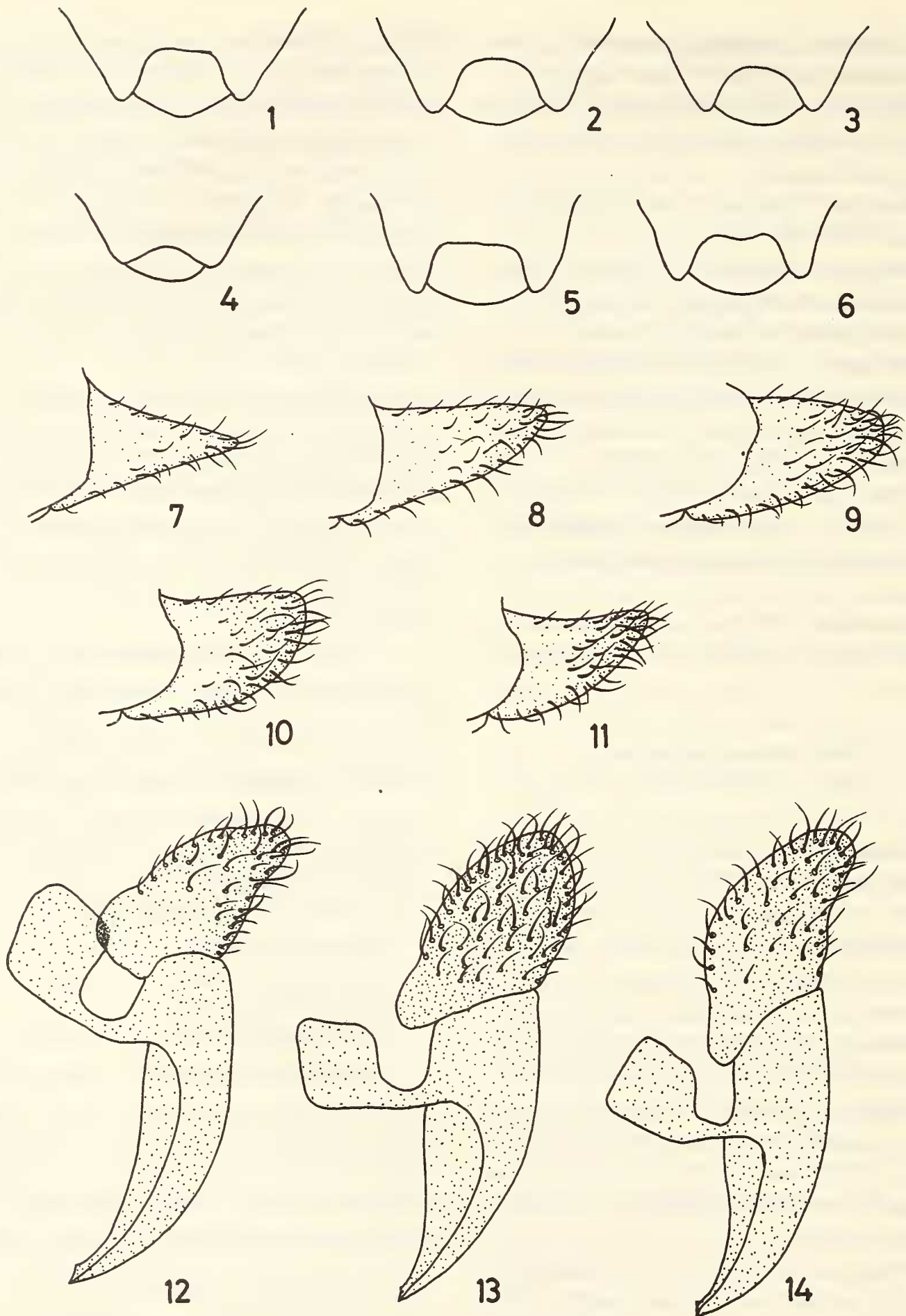
**Male:** Unknown.

**Holotype:** Female, Arunachal Pradesh, Bomdila, 2550 m, 9.v.1993.

**Distribution:** Arunachal Pradesh.

**Diagnosis:** *F. himenderi* is unique in having presence of a transverse band on lower posteroventral 1/2 of mesopleuron; characteristic shape of median fovea; mesosterna entirely black; rounded ovipositor sheath; distinct post-, inter- and circumocellar furrows. These and the ratio of antennal segments 3 and 4; and relative lengths of metabasitarsus and following joints combined, easily differentiate *F. himenderi* from the rest of *Ferna* species.

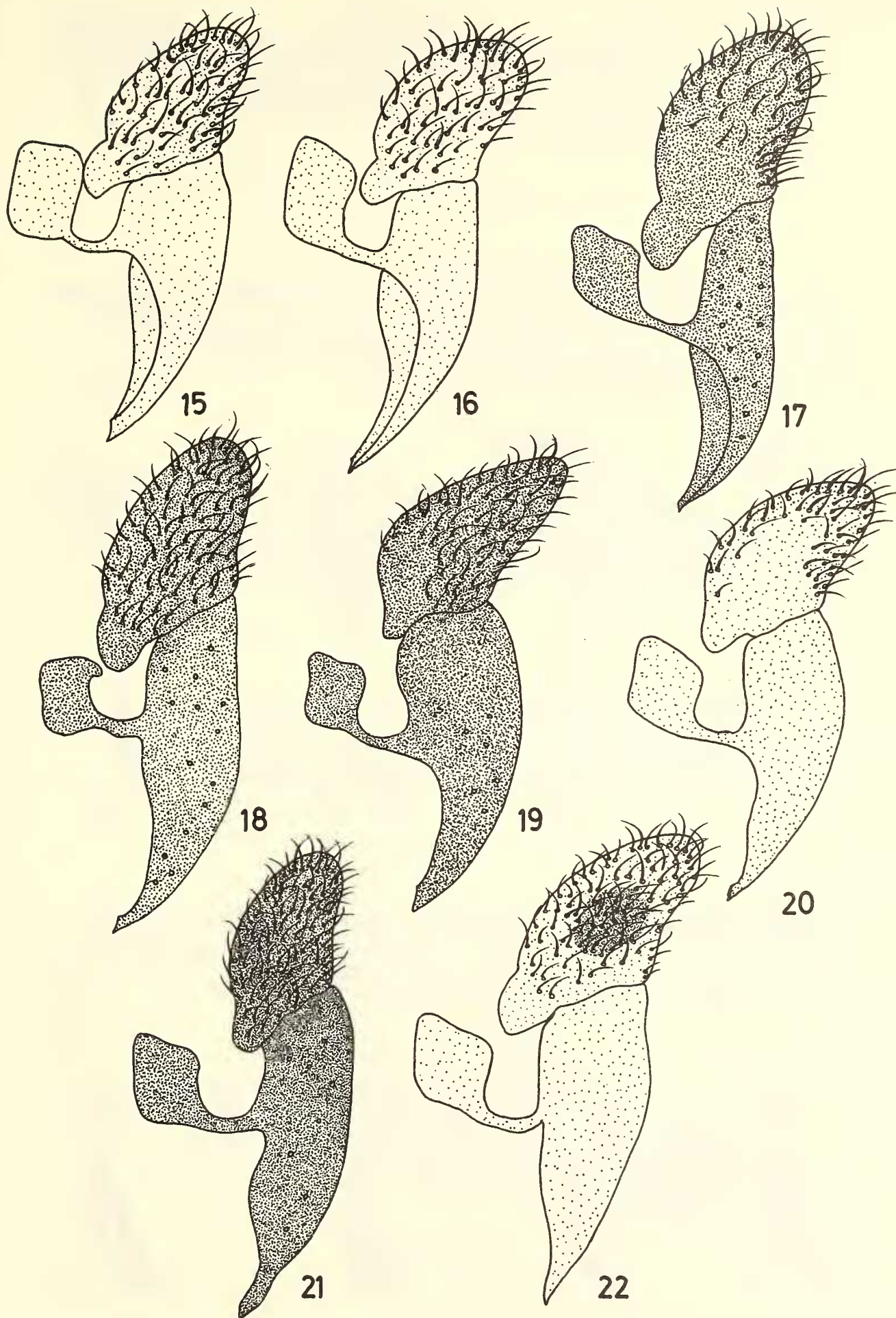
**Etymology:** The species is named after Mr. Himender Bharti, who is working on sawfly taxonomy at Punjabi University, Patiala.



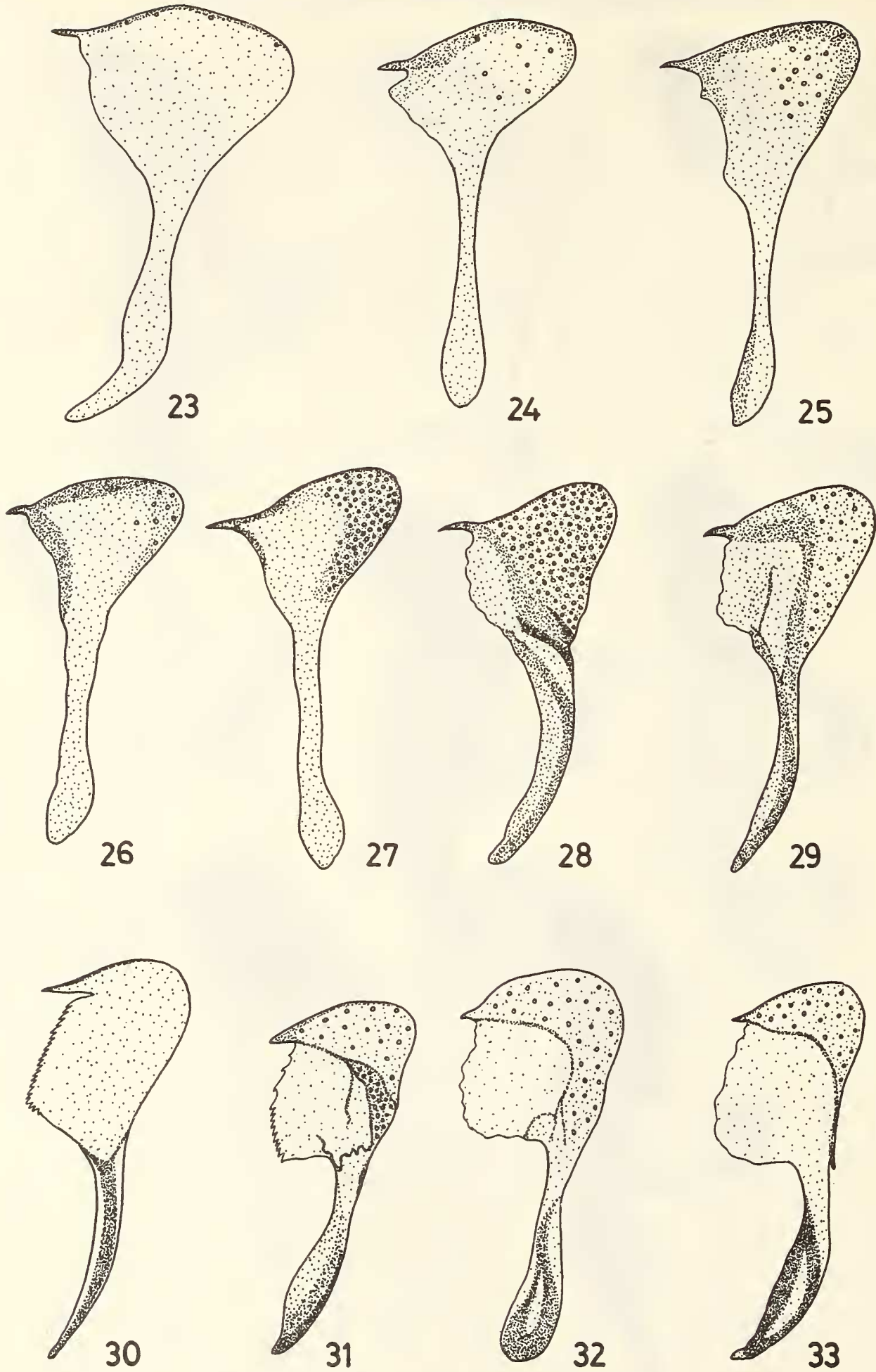
Figs. 1-14. Species of genus *Ferna* Malaise

1-6. Clypeus & labrum: 1. *acclivata*; 2. *canalicula*; 3. *foveolata*; 4. *emarginata*; 5. *himenderi*; 6. *naga*;  
 7-11. Lateral view of ovipositor sheath: 7. *acutisera*; 8. *brevis*; 9. *foveolata*; 10. *himenderi*; 11. *himalayana*;  
 12-14. Gonoforceps: 12. *indiana*; 13. *chambali*; 14. *nigra*.





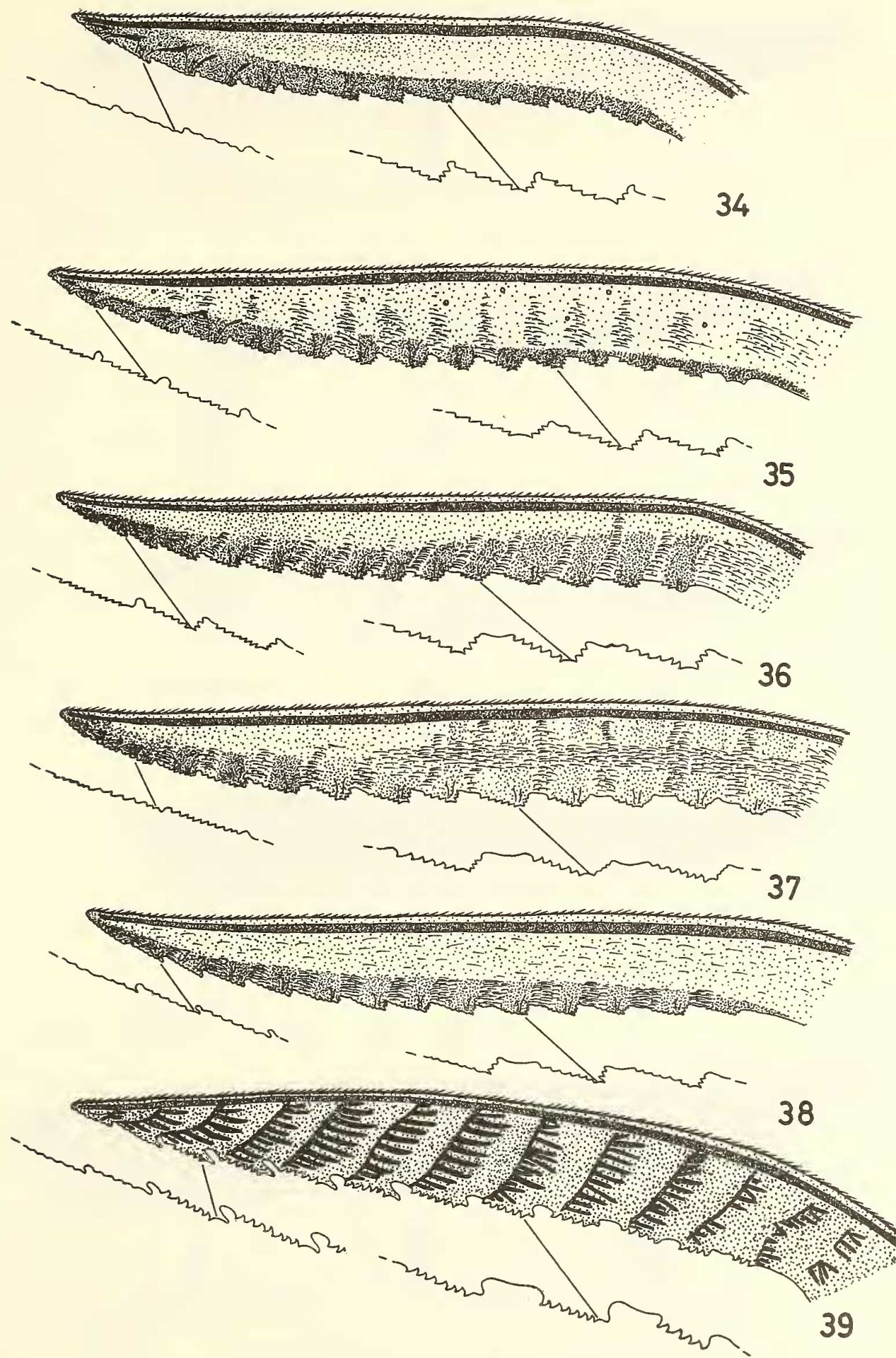
Figs. 15-22. Species of genus *Ferna* Malaise  
 15-22. Gonoforceps: 15. *canalicula*; 16. *acclivata*; 17. *foveolata*; 18. *emarginata*;  
 19. *cinguliventris*; 20. *himalayana*; 21. *dutti*; 22. *sagittata*.



Figs. 23-33. Species of genus *Ferna* Malaise

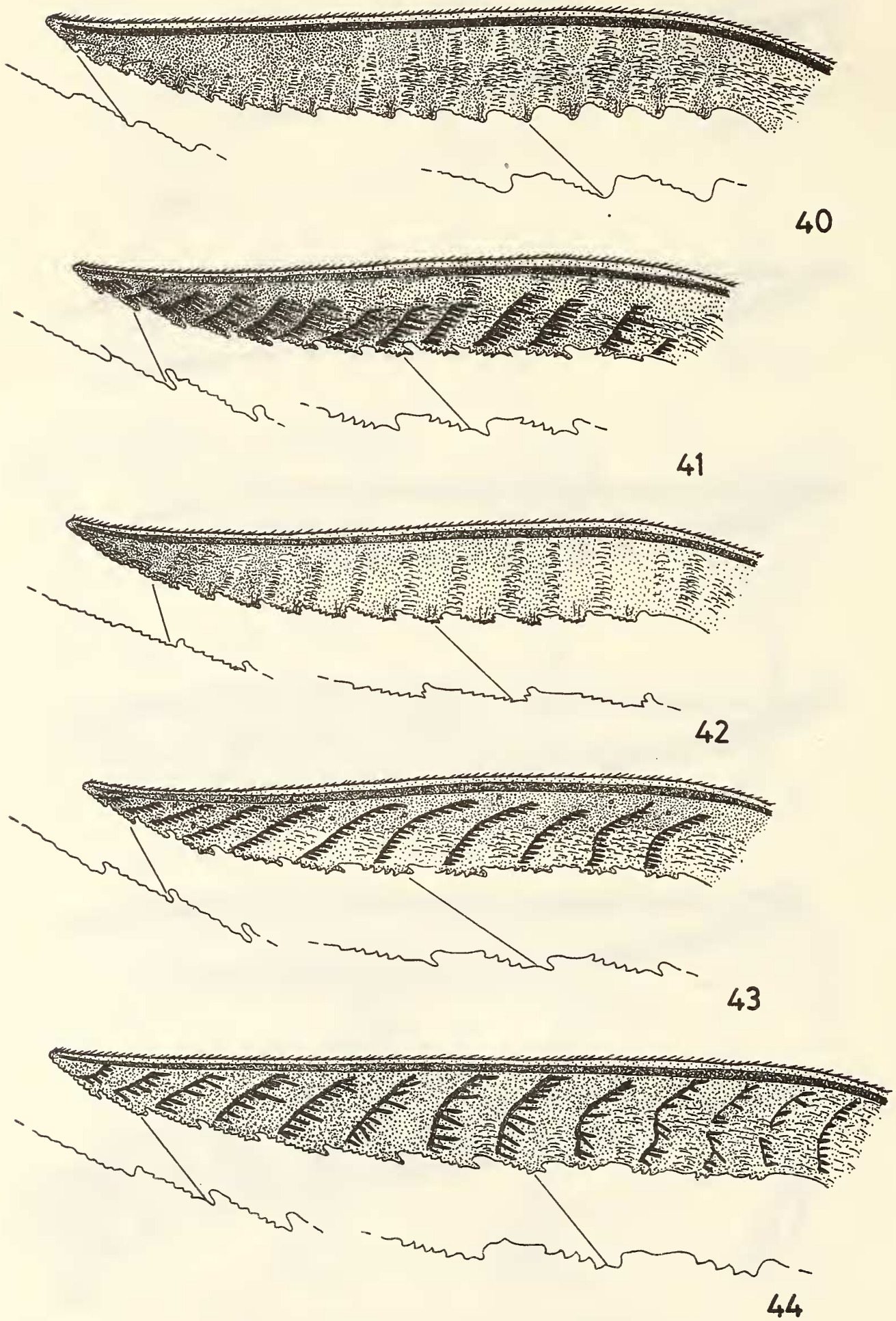
23-33. Penis valves: 23. *indiana*; 24. *chambali*; 25. *nigra*; 26. *canalicula*; 27. *acclivata*; 28. *foveolata*; 29. *emarginata*; 30. *cinguliventris*; 31. *himalayana*; 32. *dutti*; 33. *sagittata*.





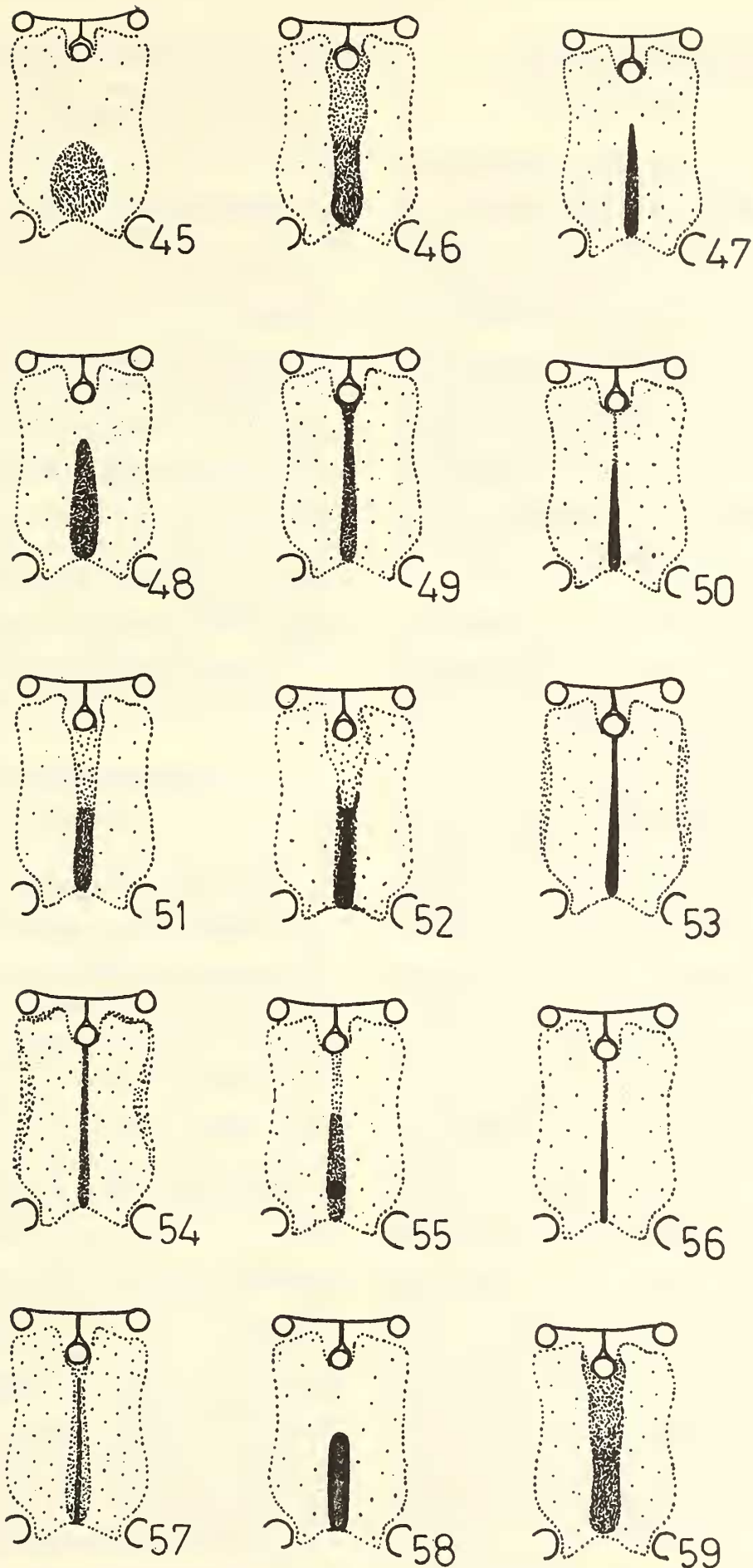
Figs. 34-39. Species of genus *Ferna* Malaise

34-39. Lancelets: 34. *chambali*; 35. *nigra*; 36. *naga*; 37. *canalicula*; 38. *acclivata*; 39. *himenderi*.



Figs. 40-44. Species of genus *Ferna* Malaise  
 40-44. Lancets: 40. *foveolata*; 41. *himalayana*; 42. *sagittata*; 43. *brevis*; 44. *pupa*.





Figs. 45-59. Species of genus *Ferna* Malaise

45-59. Frontal area of head showing median fovea: 45. *indiana*; 46. *chambali*; 47. *nigra*; 48. *naga*; 49. *canalicula*; 50. *acclivata*; 51. *himenderi*; 52. *brevis*; 53. *foveolata*; 54. *cinguliventris*; 55. *himalayana*; 56. *dutti*; 57. *sagittata*; 58. *pupa*; 59. *emarginata*.

***Ferna foveolata* sp. nov.**  
(Figs. 3, 9, 17, 28, 40, 53)

**Female:** Colour: Body black; the following parts are yellowish white: clypeus; labrum; mandible barring apex; a square spot on supraclypeal area; narrow inner orbit; tegula; a spot each on meso- and metascutella; a transverse band on lower posteroventral 1/2 of mesopleuron not reaching epicnemium; metepimeron except anterodorsal 1/2; deflexed lateral sides of tergites 2-4; sternites 2-4; all coxae and trochanters. Rest of parts of all legs uniformly fuscoferruginous. Wings hyaline venation including costa, subcosta and stigma fuscous.

**Structure:** Length 5.5 mm. Antenna long, 3.2x head width; scape as long as its apical width; pedicel 2x its apical width; segments 3 shorter than 4 as 4:5; clypeus (Fig. 3) roundly incised upto 1/2 of its medial length; labrum broader than long as 3:2; malar space 0.5x diameter of median ocellus; LID:IDMO:EL :: 6:7:4; head without postgenal carina; supra-antennal tubercles moderate and confluent with similar roundly raised frontal ridges; median fovea in form of deep seam in its anterior half and posterior clearly reaching median ocellus (Fig. 53); post- inter- and circumocellar furrows sharp and distinct; lateral furrows distinct, deep parallel and ending just before hypothetical hind margin of head; postocellar area almost flat, broader than long as 5:4; head narrowing behind eyes; POL:OCL:OOL :: 2:3:3; mesoscutellum subconvex; appendage not carinate; tarsal claw with subapical tooth shorter than apical one and without basal lobe; metabasitarsus shorter than following joints combined as 8:9; metatibial spurs subequal in length; IATS:MB:OATS :: 3:8:2. Lancet (Fig. 40) with 19 serrulae. Lateral view of ovipositor sheath as in Fig. 9.

**Sculpture and pubescence:** Head with a few scattered, minute punctures, surface shining; thorax almost apunctate except mesonotum which is punctured like head, surface shining with general oily lustre; abdomen apunctate, shining.

Body covered with survey pubescence.

**Male:** Length 5 mm. Similar to female. Genitalia: penis valve (Fig. 28), gonoforceps (Fig. 17).

**Holotype:** Female, West Bengal, Darjeeling, 2280 m, 7.v.1993.

**Paratype:** 1 male, with same data as holotype.

**Distribution:** India: West Bengal.

**Diagnosis:** *F. foveolatus* is close to *F. longiserra* Malaise, but can be distinguished by the malar space being 0.5x diameter of median ocellus; characteristic shape of median fovea; distinct colour pattern of the body; ratio of antennal segments 3 and 4, and relative lengths of metabasitarsus and following joints combined.

**Etymology:** The species name pertains to the characteristic shape of median fovea.

***Ferna emarginata* sp. nov.**  
(Figs. 4, 18, 29, 59)

**Female:** Unknown.

**Male:** Colour: Body black; the following areas are yellowish white: scape; clypeus; labrum; mandible barring apex; a spot on supraclypeal area extending upto upper rim of antennal socket; broad inner orbit; lower margin of hind orbit; tegula; inner margin of mesonotal lateral lobe adjoining mesonotal middle lobe; anterior 1/2 of mesocutellum; parapterum; a transverse band on lower 1/2 of mesopleuron; lower 1/2 of metapleuron; posterior margin of tergite 2; deflexed lateral sides of all tergites; all sternites entirely; all coxae and trochanters. All femora, tibiae and tarsi of front four legs, are fuscoferruginous; metatarsi fuscous. Wings hyaline; venation including costa; subcosta and stigma piceous.

**Structure:** Average length 5 mm. Antenna 3.7x head width; scape and pedicel each as long as its apical width; segment 3 shorter than 4 as 4:5; clypeus (Fig. 4) subtriangularly incised upto 1/3 of its medial length; labrum broader than long as 2:1; malar space 0.5x diameter of median



ocellus; LID:IDMO:EL :: 6:7:4; head without postgenal carina; supra-antennal tubercles moderate and confluent with similarly roundly raised frontal ridges; median fovea in form of deep ditch in its anterior 1/2 and posteriorly reaching median ocellus (Fig. 59); post- inter- and circumocellar furrows distinct; lateral furrows distinct, excurved (bulging) and abruptly ending just before hypothetical hind margin of head; postocellar area broader than long as 3:2; head narrowing behind eyes; POL:OCL:OOL :: 2:2:3; mesoscutellum subconvex; appendage not carinate; tarsal claw with subapical tooth shorter than apical one and without basal lobe; metabasitarsus shorter than following joints combined as 5:4; metatibial spurs subequal in length; IATS:MB:OATS :: 4:10:3. Genitalia: penis valve (Fig. 29), gonoforceps (Fig. 18).

**Sculpture and pubescence:** Head with dense minute punctures, surface shining; mesonotum with dense, minute, irregular punctures, surface shining; mesoscutellum with scattered, minute punctures on its posterior part; appendage apunctate, polished; mesepisternum minutely punctured; mesosternum with a few scattered, minute punctures, surface shining with general oily lustre; abdomen apunctate, subshining. Body covered with silvery pubescence.

**Holotype:** Male, Assam, Jatinga, 800 m, 7.v.1993.

**Paratypes:** 2 males, with same data as holotype.

**Distribution:** Assam.

**Diagnosis:** The triangularly incised clypeus; malar space equal to half the diameter of median ocellus; entirely black mesosternum and mesonotal middle lobe; characteristic shape of median fovea; ratio of antennal segments 3 and 4, are some of the significant characters which distinguish *F. emarginata* from other species described under the genus.

**Etymology:** As the clypeus is triangularly incised, the species is named *F. emarginata*.

***Ferna cinguliventris* sp. nov.**  
(Figs. 19, 30, 54)

**Female:** Unknown.

**Male:** Colour: Body black; the following parts are yellowish white: clypeus; labrum; mandible barring apex; a spot on supraclypeal area; narrow inner and hind orbits; posterodorsal and posterolateral margins of pronotum; tegula; a spot on anterior 1/2 of mesoscutellum; a transverse band on lower 2/3 of mesopleuron; lower 1/2 of metapleuron; tergites 2 and 3; deflexed lateral sides of tergites 2 and 3; sternites 2-4 entirely; all legs except all tarsi of four hind legs which are more or less fuscous. Wings hyaline; venation including costa, subcosta and stigma piceous.

**Structure:** Average length 4 mm. Antenna 3.3x head width; scape as long as its apical width; pedicel 1.5x its apical width; segment 3 shorter than 4 as 6:7; clypeus (Fig. 3) roundly incised upto 1/2 of its medial length; labrum broader than long as 2:1; malar space 1x diameter of median ocellus; LID:IDMO:EL :: 6:7:4; head without postgenal carina; supra-antennal tubercles moderate and confluent with similar roundly raised frontal ridges; median fovea in form of deep narrow seam clearly extending upto median ocellus (Fig. 54); post-, inter- and circumocellar furrows sharp and distinct; lateral furrows distinct, parallel and ending just before hypothetical hind margin of head; postocellar area broader than long as 5:4; head narrowing behind eyes; POL:OCL:OOL :: 2:2:3; mesoscutellum subconvex; appendage not carinate; tarsal claw with subapical tooth shorter than apical one; metabasitarsus shorter than following joints combined as 4:5; metatibial spurs subequal in length; IATS:MB:OATS :: 4:8:3. Genitalia: penis valve (Fig. 30), gonoforceps (Fig. 19).

**Sculpture and pubescence:** Head with dense minute punctures, surface shining; mesonotum with dense, minute, irregular punctures, surface shining; mesoscutellum with scattered, minute punctures on its posterior part;



appendage apunctate, polished, mesepisternum minutely punctured; mesosternum with a few scattered, minute punctures, surface shining with general oily lustre; abdomen apunctate, less shining. Body covered with silvery pubescence.

**Holotype:** Male, Nagaland, Zunheboto, 1874 m, 16.v.1993.

**Paratype:** 1 male, with same data as holotype.

**Distribution:** Nagaland.

**Diagnosis:** The characteristic shape of median fovea; coloured band on abdomen; malar space of the diameter of median ocellus; mesosternum and mesonotal middle lobe entirely black, distinguish *F. cinguliventris* from all the species reported under this-genus.

**Etymology:** The species name pertains to the yellowish white band that covers abdominal segments 2 and 3 completely.

*Ferna himalayana* sp. nov.

(Figs. 11, 20, 31, 41, 55)

**Female:** Colour: Body black; the following parts are: yellowish white clypeus; labrum, mandible barring apex; a spot on supra-clypeal area extending upto upper rim of antennal socket; broad inner orbit except posterior 1/4; lower 1/3 of hind orbit; a spot on temple; posterodorsal angle of pronotum; tegula; a spot on anterior 1/2 of mesoscutellum; a transverse band on lower 1/2 of mesopleuron; posterior margin of tergites 2-5 and 9; deflexed lateral sides of all tergites; all sternites entirely; coxae, trochanters and femora of all legs. The tibiae and tarsi of front four legs and metatibia except apical 1/4 fuscoferruginous; apex of metatibia and metatarsi fuscus. Wings hyaline, venation including costa, subcosta and stigma -piceous.

**Structure:** Average length 5 mm. Antenna 3.2 x head width; scape and pedicel each as long as its apical width; segment 3 shorter than 4, as 5:6; clypeus (Fig. 1) subsquarely incised upto 1/2 of its medial length; labrum broader than long as 2:1; malar space 0.5x diameter of median

ocellus; LID:IDMO:EL :: 3:3:2; head without postgenal carina; supra-antennal tubercles moderate and confluent with insignificant frontal ridges; median fovea in form of deep ditch with a minute medial pit in its anterior 1/2 and posteriorly only shallowly reaching median ocellus (Fig. 55); post-, inter- and circumocellar furrows distinct; lateral furrows distinct and abruptly ending just before hypothetical hind margin of head; postocellar area broader than long as 2:1; head narrowing behind eyes; POL:OCL:OOL :: 2:2:3; mesoscutellum subconvex; appendage not carinate; tarsal claw with subapical tooth shorter than apical one and without basal lobe; metabasitarsus shorter than following joints combined as 6:7; metatibial spurs subequal in length; IATS:MB:OATS :: 4:8:3. Lancet (Fig. 41) having 11 serrulae. Lateral view of ovipositor sheath as in Fig. 11.

**Sculpture and pubescence:** Head with a few minute punctures, more concentrated on frontal area, surface shining; mesonotum with dense, minute, irregular punctures, surface shining; mesoscutellum with few scattered minute punctures; appendage apunctate, polished; mesepisternum and mesosternum apunctate, shining with general oily lustre; abdomen apunctate, not as shiny. Body covered with silvery pubescence.

**Male:** Length 4 mm. Similar to female. Genitalia: penis valve (Fig. 31), gonoforceps (Fig. 20).

**Holotype:** Female, Uttar Pradesh, Barkot, 2000 m, 28.vi.1992.

**Paratypes:** Uttar Pradesh, Rana, 1800 m, (2 females), 20.vi.1992; Mastura, 1800 m, (2 females), 25.vi.1992; Auli, 2480 m, (1 male), 27.vi.1992; Barkot, 2000 m. (2 females), 28.vi.1992.

**Distribution:** Uttar Pradesh.

**Diagnosis:** The characteristic shape of median fovea; distinct colour pattern of body; postocellar area broader than long as 2:1; and ratio of antennal segments 3 and 4, distinguish *F. himalayana* from other species of the genus.



**Etymology:** Named after the Great Himalaya, in which the type locality falls.

***Ferna dutti*** sp. nov.  
(Figs. 21, 32, 56)

**Female:** Unknown.

**Male:** Colour: Body black; the following parts are yellowish white clypeus; labrum; mandible barring apex; a spot on supra-clypeal area; narrow inner orbit; lower 1/4 of hind orbit; a spot on temple; posterodorsal margin of pronotum; tegula; a faint spot before mesoscutellum; a spot on mesoscutellum; a transverse band on lower 1/2 of mesopleuron; a spot on metasternum; all legs except tibiae and tarsi, which are light brownish. Wings hyaline, venation including costa, subcosta and stigma dark brown.

**Structure:** Average length 5 mm. Antenna 3x head width; scape and pedicel each as long as its apical width; segment 3 shorter than 4 as 4:5; clypeus (Fig. 2) roundly incised upto 1/2 of its medial length; labrum broader than long as 3:2; malar space 0.5x diameter of median ocellus; LID:IDMO:EL :: 6:7:4; head without postgenal carina; supra-antennal tubercles moderate and confluent with similar roundly raised frontal ridges; median fovea in the form of a deep seam in its anterior 1/2 and posteriorly only shallowly though distinctly reaching median ocellus (Fig. 56); post-, inter- and circumocellar furrows distinct; lateral furrows distinct, excurved (bulging) and abruptly ending just before hypothetical hind margin of head; postocellar area broader than long as 3:2; head narrowing behind eyes; POL:OCL:OOL :: 1:1:1; mesoscutellum subconvex; appendage not carinate; tarsal claw with subapical tooth shorter than apical one and without basal lobe; metabasitarsus shorter than following joints combined as 2:3; metatibial spurs subequal in length; IATS:MB:OATS :: 5:12:3. Genitalia: penis valve (Fig. 32), gonoforceps (Fig. 21).

**Sculpture and pubescence:** Head with a few minute punctures on frontal area, surface shining; thorax with dense, minute, irregular punctures, more conspicuous on posterior slope of mesoscutellum, but appendage apunctate and polished; abdomen microstricted, surface subshining. Body covered with silvery pubescence except for the yellowish white parts where it appears to be golden.

**Holotype:** Male, Arunachal Pradesh, Nine Mile, 1200 m, 24.v.1993.

**Paratypes:** 4 males, with same data as holotype.

**Distribution:** Arunachal Pradesh.

**Diagnosis:** *F. dutti* is unique in the malar space equal to half the diameter of median ocellus; characteristic shape of median fovea; all tergites black above; presence of a transverse band on lower 1/2 of mesopleuron; mesosternum entirely black. These along with ratio of antennal segments 3 and 4, and scape and pedicel each as long as the apical width are diagnostic.

**Etymology:** The species is named after the collector, Mr. Dyal Dutt.

***Ferna sagittata*** sp. nov.  
(Figs. 22, 33, 42, 57)

**Female:** Colour: Body black, the following parts are whitish yellow: clypeus; labrum; mandible barring apex; extreme narrow orbit; a faint spot on temple; posterodorsal margin of pronotum; tegula; sagittated apex of mesonotal middle lobe; a spot on mesoscutellum; parapterum; a transverse band on lower half of mesopleuron; lower half of metapleuron; deflexed lateral sides of all tergites; all sternites entirely; all legs. Wings are hyaline; venation including costa, subcosta and stigma piceous.

**Structure:** Average length 6 mm. Antenna 3.2x head width; scape and pedicel each 1.3x its apical width; segment 3 shorter than 4 as 5:6; clypeus (Fig. 5) subrectangularly incised upto 1/2 of its medial length; labrum broader than long as 3:2; malar space 1x diameter of median ocellus;



LID:IDMO:EL :: 6:7:4; head without postgenal carina; supra-antennal tubercles moderate and confluent with roundly raised frontal ridges; median fovea in form of deep broad ditch shallowly reaching median ocellus (Fig. 57); post-, inter- and circumocellar furrows distinct; lateral furrows deep, parallel and abruptly ending well before hypothetical hind margin of head; postocellar area broader than long as 5:4; head narrowing behind eyes; POL:OCL:OOL :: 1:1:1; mesoscutellum subconvex; appendage not carinate; tarsal claw with subapical tooth shorter than apical one and without basal lobe; metabasitarsus subequal to following joints combined as 6:7 metatibial spurs subequal in length; IATS:MB:OATS :: 4:8:3. Lancet (Fig. 42) having 13 serrulae. Lateral view of ovipositor sheath as in Fig. 9.

**Sculpture and pubescence:** Head with dense, minute punctures, surface shining; mesonotum with dense, minute, irregular punctures, surface shining; mesoscutellum with scattered, minute punctures on its posterior part; appendage apunctate, polished; mesepisternum minutely punctured; mesosternum with a few scattered, minute punctures, surface shining with general oily lustre; abdomen apunctate, subshining. Body covered with silvery pubescence.

**Male:** Average length 5 mm. Similar to female except in the following: deflexed lateral sides of all tergites and sternites entirely black; yellowish white spot present on supraclypeal area. Genitalia: penis valve (Fig. 33), gonoforceps (Fig. 22).

**Holotype:** Female, Arunachal Pradesh, Nine Mile, 1200 m, 24.v.1993.

**Paratypes:** 3 females, 12 males, with same data as holotype.

**Distribution:** Arunachal Pradesh.

**Diagnosis:** *F. sagittata* is unique in having yellowish white sagittated apex of mesonotal middle lobe; malar space of the diameter of median ocellus; all tergites and mesosternum entirely black; rounded ovipositor sheath. These characters and ratio of antennal segments 3 and 4

distinguish this species from other *Ferna* species.

**Etymology:** The species name pertains to the coloured sagittated apex of mesonotal middle lobe.

*Ferna brevis* sp. nov.

(Figs. 8, 43, 52)

**Female:** Colour: Body black, the following parts are yellowish white: clypeus; labrum; mandible barring apex; supraclypeal area; lower 1/3 of inner orbit; a narrow streak on inner margin of eye; lower 1/2 of meso- and metapleura; deflexed lateral sides of all tergites; all sternites; all legs except tarsi more or less. Wings are hyaline, venation including costa, subcosta and stigma light to dark brown.

**Structure:** Length 4 mm. Antenna 3.2x head width; scape and pedicel each as long as its apical width; segment 3 shorter than 4 as 4:5; clypeus (Fig. 2) roundly incised upto 1/2 of its medial length; labrum broader than long as 2:1; malar space 1x diameter of median ocellus; LID:IDMO:EL :: 6:7:4; head without postgenal carina; supra-antennal tubercles insignificant and confluent with roundly raised frontal ridges; median fovea in the form of deep ditch in its anterior 1/2 and posteriorly shallowly reaching median ocellus (Fig. 52); post-, inter- and circumocellar furrows sharp and distinct; lateral furrows distinct, parallel and ending just before hypothetical hind margin of head; postocellar area broader than long as 3:2; head narrowing behind eyes; POL:OCL:OOL :: 1:1:1; mesoscutellum subconvex; appendage not carinate; tarsal claw with subapical tooth shorter than apical one; metabasitarsus shorter than following joints combined as 3:4; metatibial spurs subequal in length; IATS:MB:OATS :: 5:12:4. Lancet (Fig. 43) with 11 serrulae. Lateral view of ovipositor sheath as in Fig. 8.

**Sculpture and pubescence:** Head with a few scattered, minute punctures, surface shining;



thorax almost apunctate, except mesonotum which is punctured like head, surface shining with general oily lustre; abdomen apunctate, shining. Body covered with silvery pubescence.

**Male:** Unknown.

**Holotype:** Female, Sikkim, Gangtok, 1700 m, 6.v.1993.

**Distribution:** Sikkim.

**Diagnosis:** The ditch-like median fovea posteriorly shallowly reaching median ocellus; postocellar area broader than long as 3:2; scape and pedicel each as long as its apical width; segments 3 and 4 as 4:5; malar space of the diameter of median ocellus; and all tergites and mesosternum entirely black, distinguish *F. brevis* from its nearest congeneric *F. pupa* and other *Ferna* species.

**Etymology:** The species name pertains to its comparatively small body size.

***Ferna pupa* sp. nov.**  
(Fig. 44, 58)

**Female:** Colour: Body black, the following parts are yellowish white: clypeus; labrum; mandible barring apex; supraclypeal area; broad lower 1/2 and a narrow streak on upper 1/2 of inner orbit; lower 1/4 of hind orbit; posterodorsal margins of pronotum; tegula; a transverse band on lower 1/2 of mesopleuron; a spot on lower 1/2 of metapleuron; deflexed lateral sides of all tergites; all sternites entirely; coxae, trochanter and femora of all legs. Rest of legs light to dark brown. Wings hyaline; venation including costa, subcosta and stigma dark brown.

**Structure:** Length 4.5 mm. Antenna 3.2x head width; scape and pedicel each 1.3x its apical width; segment 3 shorter than 4 as 8:9; clypeus (Fig. 5) subrectangularly incised upto 1/2 of its medial length; labrum broader than long as 2:1; malar space 1x diameter of median ocellus; LID:IDMO:EL :: 6:7:4; head without postgenal carina; supra-antennal tubercles moderate and confluent with similarly roundly raised frontal

ridges; median fovea in the form of deep ditch in its anterior 1/2 and posteriorly not reaching median ocellus (Fig. 58); post-, inter- and circumocellar furrows distinct; lateral furrows deep, distinct, parallel and ending abruptly well before hypothetical hind margin of head; postocellar area broader than long as 2:1; head narrowing behind eyes; POL:OCL:OOL :: 4:4:5; mesoscutellum subconvex; appendage not carinate; tarsal claw with a subapical tooth shorter than apical one; metabasitarsus shorter than following joints combined as 6:7; metatibial spurs subequal; IATS:MB:OATS :: 5:12:3. Lancet (Fig. 44) having 11 serrulae. Lateral view of ovipositor sheath as in Fig. 8.

**Sculpture and pubescence:** Head with a few minute punctures, more concentrated on frontal area, surface shining; mesonotum with dense, minute, irregular punctures, surface shining; mesoscutellum with a few scattered minute punctures; appendage apunctate, polished; mesepisternum and mesosternum apunctate, shining with general oily lustre; abdomen apunctate, subshining. Body covered with silvery pubescence.

**Male:** Unknown.

**Holotype:** Female, Arunachal Pradesh, Bomdila, 2550 m, 25.v.1993.

**Distribution:** Arunachal Pradesh.

**Diagnosis:** *F. pupa* is distinguished by the characteristic shape of median fovea; distinct colour pattern of body; scape and pedicel each 1.3x its apical width; ratio of antennal segments 3 and 4 as 8:9; clypeal incision; and length of malar space.

**Etymology:** The species is named after the Punjabi University, Patiala (PUP), where this work was carried out.

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